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Improvement In Patient Care Means More Personnel

Deaconess Hospital Reviews the Reasons for Personnel Increases in the Last 10 Years

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Some time ago I was challenged by my Budget Committe to make a study of the reasons for the large increase in personnel in the hospital in the ten years 1940 to 1950. I began this several months ago and set forth below the findings, which will be recognized by all those intimately connected with hospitals.

First, I shall emphasize general changes found in all hospitals during this period, and then I shall take up the departments individually and give the reasons for increased personnel as found in our hospital here.

We are a 300-bed hospital. In 1940 we had 405 full-time employees and 48 part-time, while in 1950 there were 540 full-time employees and 86 part-time. During this period the number of patient days has not noticeably increased, but the number of patients has, because of the shortened stay of patients. The number of personnel has increased approximately 35 per cent.

1. The shorter length of stay has increased the turn-over of hospital patients, giving us approximately 10 per cent more individual patients to care for than in 1940. This increases the work down through all departments. The admitting office must admit more patients daily; the laboratories must examine more specimens; the x-ray department must take more pictures; nursing must care for more patients; dietary must prepare more meals for more personnel; housekeeping must wash rooms more often; laundry must process more linen. This increase in patients and work is common to all hospitals, and tends to increase personnel approximately 10 per cent.

2. Then there has been a gradual lessening of the hours of labor for all employees during this period. In 1940 our nurses worked a 52-hour week. Today they work a 40 to 44-hour week. This, with the same type of personnel, would require a 30 per cent increase in numbers to do the same work, and since the work is much more complicated and painstaking, the number must be further increased. Many mechanical devices have been created in the past ten years to decrease labor, but one of the things which keeps hospital personnel and costs high is the fact that no machine yet invented can take the place of a nurse. The caring for patients is still hand work. Machines save us personnel in the laundry, as we have demonstrated by a new folding mangle and presses, but no machine can reduce the need for nurses in caring for patients. In fact, all the new medical advances have tended to increase the work rather than decrease it. This fact is sometimes overlooked. Nursing is not a part of the machine age.

This same trend toward shorter hours runs through all departments of the hospital, requiring more labor to do the same amount of work.

3. Another very definite reason for increased personnel in all hospitals is the changed attitude of almost all personnel toward their work or job. This is especially true of new workers in certain grades of employment. An unusual amount of looking at the clock means necessarily lower production and more people needed to do the same amount of work. The mid-morning and mid-afternoon relief period seems also to be unduly prevalent, even with a fairly liberal lunch hour and a shorter work day. I mention this not necessarily to condemn it, but to list it as another reason.

May I also mention the general change to the accrual system in our accounting offices and more complicated billings required for third party payments and more financial and statistical reports called for by public agencies and private funds, such as United Community Services, American and Massachusetts Hospital Associations.

4. A fourth general reason is found in the preparation and use of the new, so-called miracle drugs, which have added so greatly to therapy but which require so much more time in preparation and use. In the past ten years, the manner of administering medications has changed considerably. Ten years ago medications were usually given orally and seldom by injection. Today it is just the opposite. There are several reasons for this change. Better manufacturing technique has produced uniform injectable products perfectly safe from contamination. Dosages can of course be absolutely uniform and accurate. Medications take effect sooner, and therefore effects can be judged sooner and more accurately. This situation has

COMPARISON OF PERSONNEL BY DEPARTMENTS
1940-1950

	1940	1950
Administration		34
Admitting	38	5
Cashiers Office		7
Public Relations	—	2
Personnel	—	2
Laboratories:		
Chemistry	40	27
Pathology		41
Blood Bank	—	14
Solutions	—	12
Dietary	85	125
Housekeeping	68	67
Laundry	25	23
Maintenance	22	25
Nursing	123	151
Health Clinic	—	2
Pharmacy	10	15
Purchasing	2	4
Record Rooms	8	10
Out-Patient and Social Service	6	6
Surgery	19	42
X-ray	7	12
	453	626
Full-Time	405	540
Part-Time	48	86

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NEW ENGLAND DEACONESS HOSPITAL
Boston 15, Massachusetts

Supervised by the Personnel and
Public Relations Departments

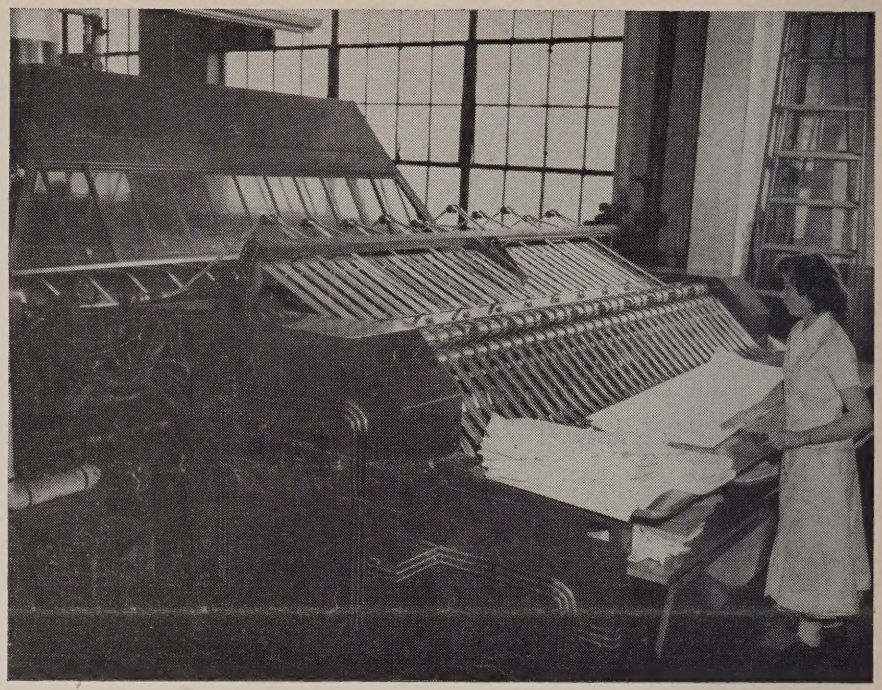

Photo by J. Coyne

NEW GIANT IRONER AND FOLDER . . . LAUNDRY MUST PROCESS MORE LINEN . . .

definitely given more work to the Nursing Staff because of the difference in time which it takes to administer medication by injection compared to giving the patient a tablet. It has also increased the amount of work for the laboratories, since the blood-levels of a patient must be watched more carefully when he is on parenteral medication.

5. Furthermore, we have added six new departments here at the Deaconess since 1940 to improve our care of patients and give us a happier working staff. In 1940 we had no Blood Bank, no Bacteriological Laboratory, no Solution Room, no Personnel Department, no Department of Public Relations, and no Health Department for nurses and other employees. The Blood Bank has added immeasurably to the welfare of patients through making inoperable cases now operable and in greatly shortening the time in the hospital of patients after operation. This department is now staffed with one scientific director, two part-time doctors for the donor clinic, four nurses, three technicians, and one clerk. It is not a burden of expense.

In 1940 our solutions were prepared in the Operating Rooms. Their use is a life-saving measure which reduces the patients' stay and makes it possible to do much more drastic surgery than could otherwise be carried out. There has been in this period a 500 per cent increase in their use, necessitating the creation of a Solutions Department where twelve people are employed; this department also pays its way.

The other four new departments have all demonstrated their usefulness in giving us a better standard of care for our patients, who are our first concern.

Now, having considered these general matters influencing the number of employees, let us look at some of the departments for answers to this question.

NURSING — Due to the increase in the student body of the School of Nursing, it has been necessary to increase the instructional staff. In 1940 there were 110 students and 33 members of the faculty. Today we have 210 students and 45 faculty members. (We recognize all supervising nurses as members of the faculty because of teaching on the floors.) Also, more supervision for the students has been indicated by the authorities, state and national, because of the training-in and administration of Chemotherapy and experimental drugs. In 1947 the Block System for the School was started in connection with the Nursing Service. This is a system whereby the student nurses alternate their classroom instruction every four weeks with ward assignment, permitting them to concentrate their effort on each phase of activity. The system requires more personnel but is unquestionably more effective in our training program. This is one of the factors which brought full accreditation to our school on recent examination.

Other reasons for increased nursing personnel include the maintenance of a full tuberculosis unit, rapid patient turnover with a much shorter convalescent period, shorter work week for personnel, increases in surgical nursing — especially during the evening and night shifts because of the longer day in the operating rooms for major surgery, and the Nurses' Aide program, which supplements our nursing in times of nurse shortage. In addition, there have been added six floor secretaries who handle the telephone calls and visitors and many small details which otherwise would take nursing time. Nursing care is undoubtedly better.

LABORATORIES — Since 1940 several new services have been added to the direction of the laboratories. Although the number of tests in the Chemical Laboratory has increased but little, their complexity has very materially increased. In the Pathological Laboratory there has been an increase of 2300 surgical specimens and 46 autopsies.

The discovery that uterine cancer can be detected by examination of the vaginal fluid, and that lung cancer can be detected by examination of the sputum has been a great step forward in these two fields. Ten years ago this fact was unknown. Today, a portion of the time of one of the doctors and full-time of one technician and part-time of a PhD. and part-time of another technician is spent in this work.

In electrocardiography, in 1940 three relatively easily taken leads were used. Now nine relatively complicated leads are routinely taken and additional ones in special cases. While this means much more accurate diagnosis for the patient with heart trouble, it has approximately tripled the time required and the number of personnel.

In 1940 the antibiotics were just beginning to be used. Now, a large number of bacteria encountered in patients must be tested as to their resistance or sensitivity to such substances as penicillin, streptomycin, aureomycin, and chloromycetin. This requires more personnel.

The work in chest and brain surgery has progressed greatly during the last ten years, and therefore, the demand on the laboratory for immediate frozen section diagnosis in the handling of these cases

Photo by J. Coyne

NEW DRUGS ARE BEING INTRODUCED CONSTANTLY . . .

as well as the more usual type of surgical cases has materially grown. This has meant the addition of more highly skilled personnel for the purpose of immediate frozen sections.

Also, whereas neuropathology could be handled in relatively routine fashion in the past, it is now of such importance that there is need for one pathologist highly skilled in this field as well as an increased technical load due to the technical problems involved. You see that the advances in medicine during the past ten years has not only demanded more personnel, but a higher trained personnel, especially in laboratory procedure.

X-RAY DEPARTMENT — In 1940 the total number of examinations in the X-ray Department was slightly less than 8,000, whereas in 1950 it was over 18,000 — more than 125 per cent increase. Of course this requires more people. In the last year the chest examination of all new employees, as well as all patients for tuberculosis, has increased the demand on the facilities of the X-ray Department.

About twenty months ago we purchased a very interesting and useful machine which has increased personnel but has proven of great value to the hospital. This is the photo-roentgen unit. On this machine all survey examinations of the chest are made, and the Deaconess Hospital is proud to have been one of the first hospitals in New England to have such a unit. The photo-roentgen examination of the chest is an exceedingly important part of the annual examination of all employees, the pre-employment examination of new employees, and during the past year has also been used as a routine survey of all patients admitted to the hospital. Seven thousand four hundred and sixty-one such examinations were done during the past year, and much valuable information has been thus obtained — at a cost of only $1 to the patient and at no cost to employees. In two such cases the newly admitted patient was found to have pneumonia and operations which had been planned for the following day were cancelled because of the known hazard of operating under such circumstances. Cases of both early and advanced tuberculosis have been found in patients and in employees; tumors of the lung, hernias of the stomach through the diaphragm, and abnormal hearts have also been found.

Below are the figures of the past year's work with this new machine. Of course this has increased the personnel in this department, but we feel it has been well worth while.

Photoroentgenograms — 1950	
Total Photoroentgenograms	7,461
Hospital patients (amb.)	4,662
Out-Patients	477
Cancer Detection Clinic	395
Employees	1,927
Unsuspected Lesions Found	
Tuberculosis	17
Tumors	11
Pneumonia	4
Hiatus Hernias	3
Thyroid Enlargement	3
Parasternal Hernias	3
Bone Lesions	2
	43

Employee Group		
Tuberculosis	4	(Rejected)
Tumor	1	
Pneumonia	1	
Bone Lesion	1	(Rejected)

SURGERY — The advances in surgery and longer hours of operation account for the increase in the surgical load and number of employees. More extensive surgery is now performed, chest surgery has been extended, there is more brain surgery, and there are longer hours of surgery with a consequent increase in the length of day for the Operating Rooms. In addition, there has been an increase in the number of operations and an emphasis on more major than minor surgical procedures. In 1940, for example, 44 per cent of the operations were major, while today 60 per cent are major — an increase of 57 per cent.

DIETARY — In an effort to improve the working hours in the Dietary Department, the split shift, which hospitals employed in 1940, has been eliminated to give the employees an uninterrupted eight hour day. This has resulted in the addition of part-time personnel in the afternoons to cover the evening meal. Also, all holidays are now observed or equivalent "time off" is given, and, therefore, extra coverage is needed. In the cafeteria, selective menus have been instituted with the cash system, and more people are required to prepare such items as salads and sandwiches and to serve the various selections on the counter. This, however, gives a much more satisfactory service and eliminates waste. When we served employees a common meal, almost everyone took it all on his tray and left whatever he did not want, which was often considerable. Now when each one pays for whatever he selects, waste is almost entirely eliminated. So much is this true that we get constant complaints from our garbage collector. His pigs are faring badly.

Another consideration is the steady increase in the number of special diets throughout the hospital. In 1950, for example, 160,476 special diets were selected, measured, weighed, and served, while in 1940 only approximately half that number were served. For this specialized work, more help is needed to prepare and serve the food, as well as dietitians to supervise the service. One dietitian can prepare and serve the food for not more than twenty diabetic patients, while she could handle five times that many regular house diets.

PHARMACY — In 1940 our total gross income from the Pharmacy Department was $102,271. In 1950 it was $280,872, an increase of 174 per cent. While some of this is due to increased prices, the increase in actual business has been ap-

proximately 100 per cent. Since 1940 the Massachusetts State Board of Registration in Pharmacy has ordered that a registered pharmacist be in attendance at all times in the Apothecary, which was not previously required. New drugs are being introduced constantly and the Pharmacy now prepares the solutions of Penicillin and Streptomycin, which we did not have in 1940. These things have all called for an increase in personnel.

PURCHASING — Since 1940 there have been a number of improvements and changes in purchasing and issuance. A perpetual inventory of all supplies regularly stocked is in operation; a record of requisitions for all supplies has been established so that the amount each requisitioning source spends is known; the purchasing records have been improved to such an extent that purchases may be made most advantageously; all housekeeping and dietary supplies (exclusive of food) are now stored and issued; the amount of printing being done for and by the Hospital continues to increase. The number of employees has doubled, but the work is heavier and more efficient.

HOUSEKEEPING AND LAUNDRY — The work of housekeeping and laundry have also increased, but the personnel in these two departments remains about the same. This is true also of Record Rooms and the Out-Patient Department.

It will be seen, therefore, that the main reason for the increase in personnel is that we have tried to give better care to patients and better treatment to our employees. We are also aware of the fact that employees are not so willing as once they were to work extra hours, when needed, and we are also aware of the fact that many of these changes in hours and wages have been forced upon us by the State Minimum Hour and Wage authorities; however, we believe we are giving better care to patients because of all the things mentioned above.

This, after all, is the test of a good hospital — does it give superior care to patients? I believe we have a good hospital — an unusually good hospital — justifying the larger number who are now occupied doing work at the Deaconess.

In summary, the increased number of patients because of the shorter stay; the shortening of hours for all employees; the introduction of special drugs requiring longer and more careful preparation; the opening of the operating rooms from eight to fourteen hours a day; the addition of the Blood Bank and the Bacteriological Laboratory; the creation of a department of Solutions and a 500 per cent increase in their use; establishment of a Personnel Department, Public Relations Department, and Health Department for employees and student nurses; the great increase in the work of the X-ray and Pharmacy Department; and the fact that nursing has become more complicated and is even more a personal job than before — all these account for the increase in personnel in the last ten years.

I firmly believe, however, that the better work being done, the better treatment for employees, and the better service to patients justify such increase. Many of these increases have brought added income. The Blood Bank, Solutions, and other laboratory procedures, Operating Rooms, X-ray, Pharmacy have increased revenue sufficient to meet the added costs.

All of these increases have been reviewed and approved by the Budget Committee annually.

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